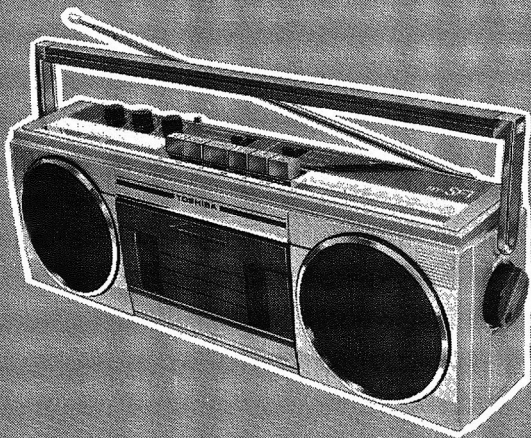


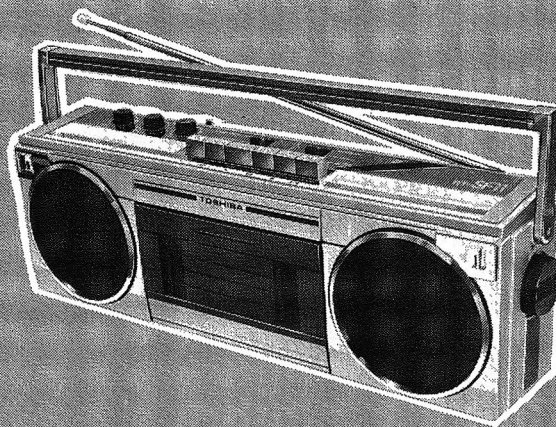
TOSHIBA

STEREO RADIO CASSETTE RECORDER

RT-SF1, RT-SF11



RT-SF1



RT-SF11

SPECIFICATIONS

Cassette tape used:	Normal: C-30, C-60, C-90, C-120	Speakers:	AM: ferrite-core antenna 100 mm (dia.) dynamic x 2 15 mm (dia.) piezo-electric type x 2 (SF11 only)
Tape speed:	4.8 cm/s.	Jacks:	[MIC] jack x 2, impedance 200 ohm to 2K ohm [PHONES] jack x 1
Track system:	Four-track two-channel stereophonic	Power supply:	AC 120V, 60 Hz DC 9V IEC R14 "C" size x 6
Recording system:	AC bias (55 kHz)	Power consumption:	10W
Erasing system:	Multipolar magnet erasing	Output power:	2.3W + 2.3W, 10% Distortion
Frequency response:	60 Hz to 10 kHz	Dimensions (W x H x D):	386 x 110 x 140 (mm)
Receiving frequency:	FM: 88 MHz to 108 MHz AM: 526.5 kHz to 1606.5 kHz	Weight:	1.65 kg (without batteries)
Intermediate frequency:	FM: 10.7 MHz AM: 455 kHz		
Antenna:	FM: telescopic antenna		

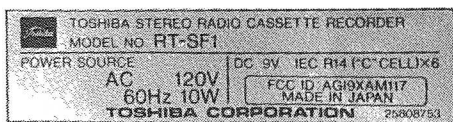
Specifications are subject to change without notice.

TA, AY, TC (SF11)
 PRINTED IN JAPAN 22905348 Jul., 1984 (B)

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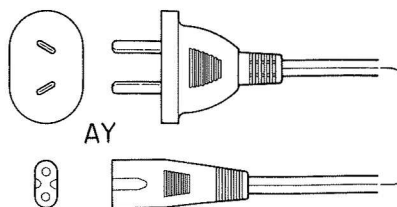
CAUTION: Before returning the unit to the customer, check that the resistance between both blades of AC plug and any accesible metal parts is more than 3M ohm after completion of servicing, using the circuit tester.



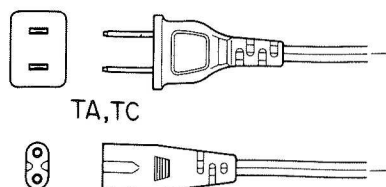
Nameplate
TA



Nameplate
SF11-TC



Power Cord
AY



Power Cord
TA
SF11-TC

1. OPERATING CONTROLS

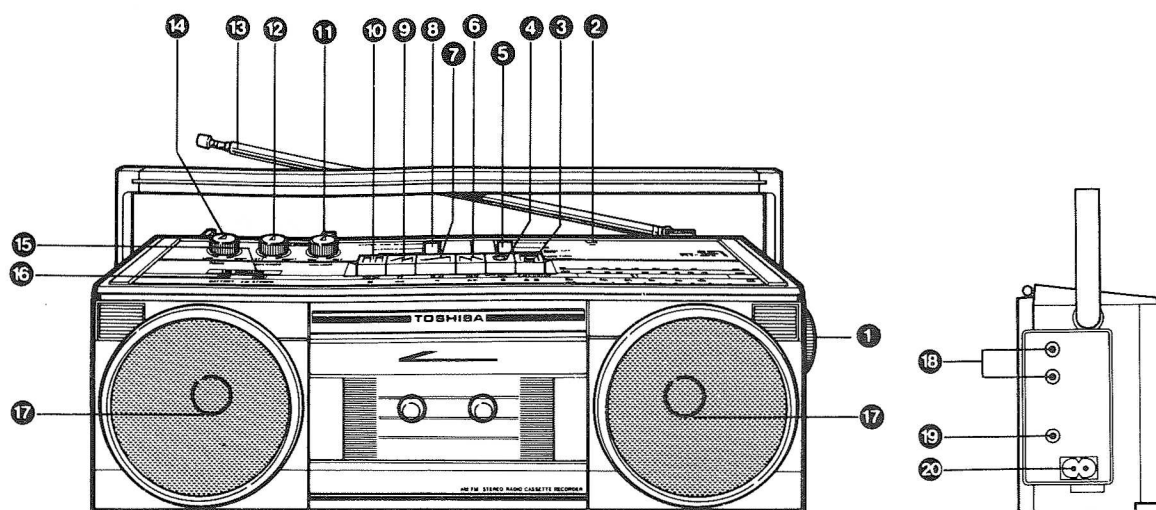


Figure 1.

- ① Tuning Knob
- ② Built-in Microphone [MIC]
- ③ [EJECT/STOP] Button
- ④ [ONE TOUCH REC] Button
- ⑤ [FUNCTION] Selector

Note: RADIO OFF/TAPE position:

This unit remains connect to mains supply in the RADIO OFF/TAPE position. Dis connect the power cord when the unit is not going to be used for a long time.

- ⑥ [REW] Button
- ⑦ [PLAY] Button
- ⑧ [MODE/BEAT] Selector

- ⑨ [FF] Button
- ⑩ [PAUSE] Button
- ⑪ [VOLUME] Control
- ⑫ [BALANCE] Control
- ⑬ Telescopic Antenna
- ⑭ [TONE] Control
- ⑮ [FM STEREO] Indicator
- ⑯ [BATTERY] Indicator
- ⑰ Speakers
- ⑱ [MIC] Jacks
- ⑲ [PHONES] Jack
- ⑳ [AC POWER] Jack

2. DISASSEMBLY INSTRUCTIONS

FRONT CABINET REMOVAL

1. Pull out the Tuning, Balance, Volume, Mode/Beat, Function and AM Band Knobs.
2. Remove six screws (A) and (B).
3. Open the cassette cover by pressing the Eject/Scope button.
4. Disconnect the speaker connector to separate the Front Cabinet from the Back Cabinet.
5. Reassemble in the reverse order.

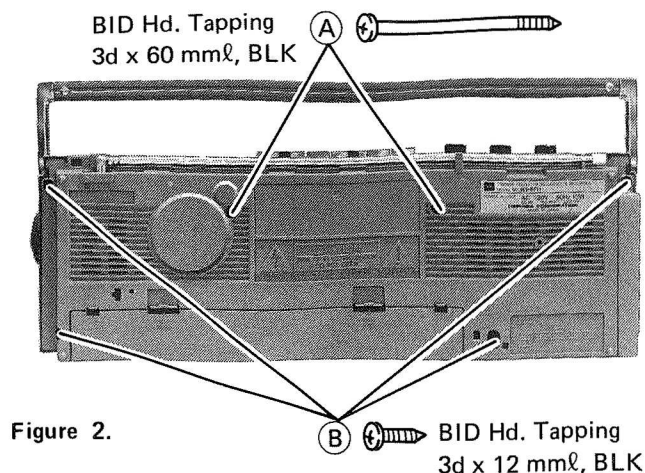


Figure 2.

MAIN P.C. BOARD REMOVAL

1. Remove three screws (C).
2. Separate the Dial Scale and LED Indicator of tuner frame from the Back Cabinet.
3. Remove the hook (D) of back cabinet and lift up from the Bar Antenna side of Main P.C. Board.
4. Separate the Main P.C. Board from the Back Cabinet.

Note: No come off the inner microphone cushion, when removing the Main P.C. Board.

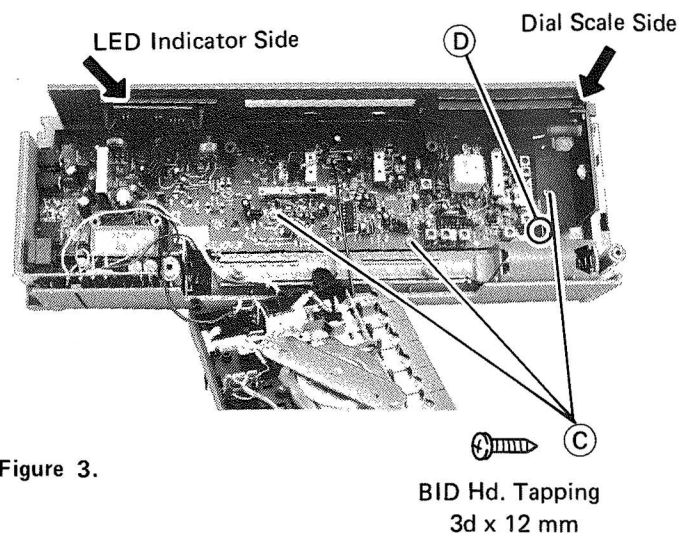


Figure 3.

CASSETTE COVER REMOVAL

1. Open the Cassette Cover.
2. Push the both side of hooks of cassette cover inward (toward each other) and pull up the cassette cover.

MECHANISM ASS'Y REMOVAL

1. Mechanism ass'y has no retaining screw, it can be removed from the Back Cabinet.
2. Remove two connectors.

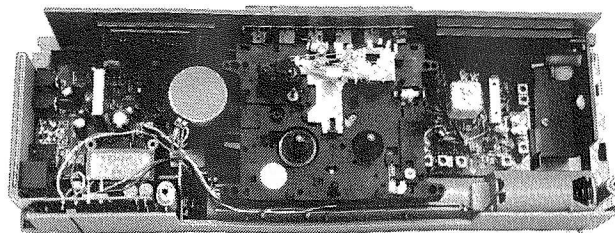


Figure 4.

3. HANDLE REMOVAL

When replacing the handle, remove it by cutting the handle washer shown in figure below with cutter etc.

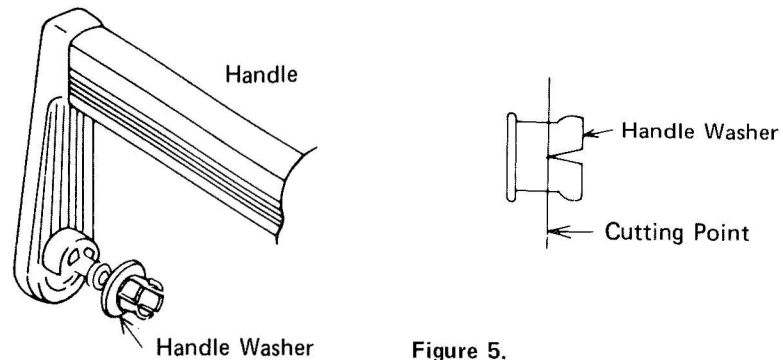


Figure 5.

4. METHOD OF P.R.C. REPAIRING

Cut defective printed-resistor-circuit off with knife. See Figure 7. Solder the replacement resistor (See replacement resistor parts list) on the opposite side of printed-circuit-board. See Figure 8.

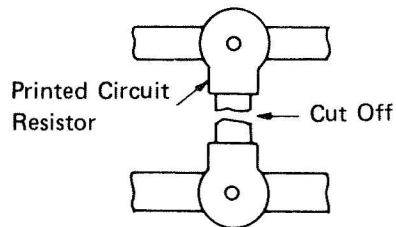


Figure 6.

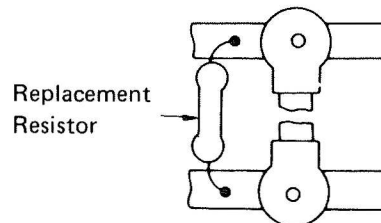


Figure 7.

5. DIAL CORD RESTRINGING

1. Thread the dial cord into the spring after tying it.
2. Insert the dial cord to the hole of drum. (Not hook the spring to the drum)
3. Turn the shaft of variable capacitor fully clockwise.
4. Wind the dial cord ① to ⑦ in numerical order.
5. Hook the spring on the drum.
6. Turn the turning shaft fully counterclockwise and set the dial pointer to the frame stopper.

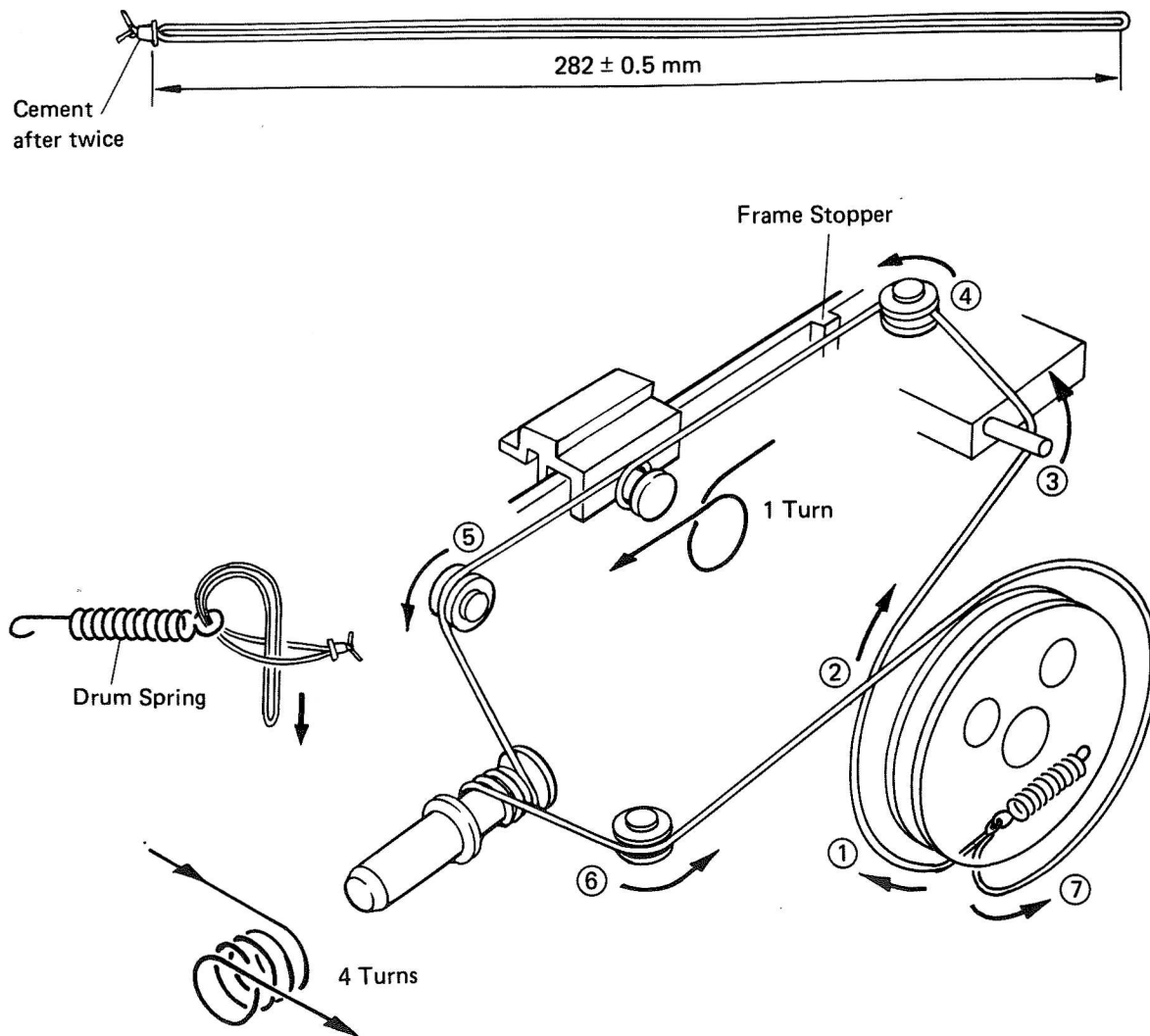


Figure 8.

6. ALIGNMENT INSTRUCTIONS

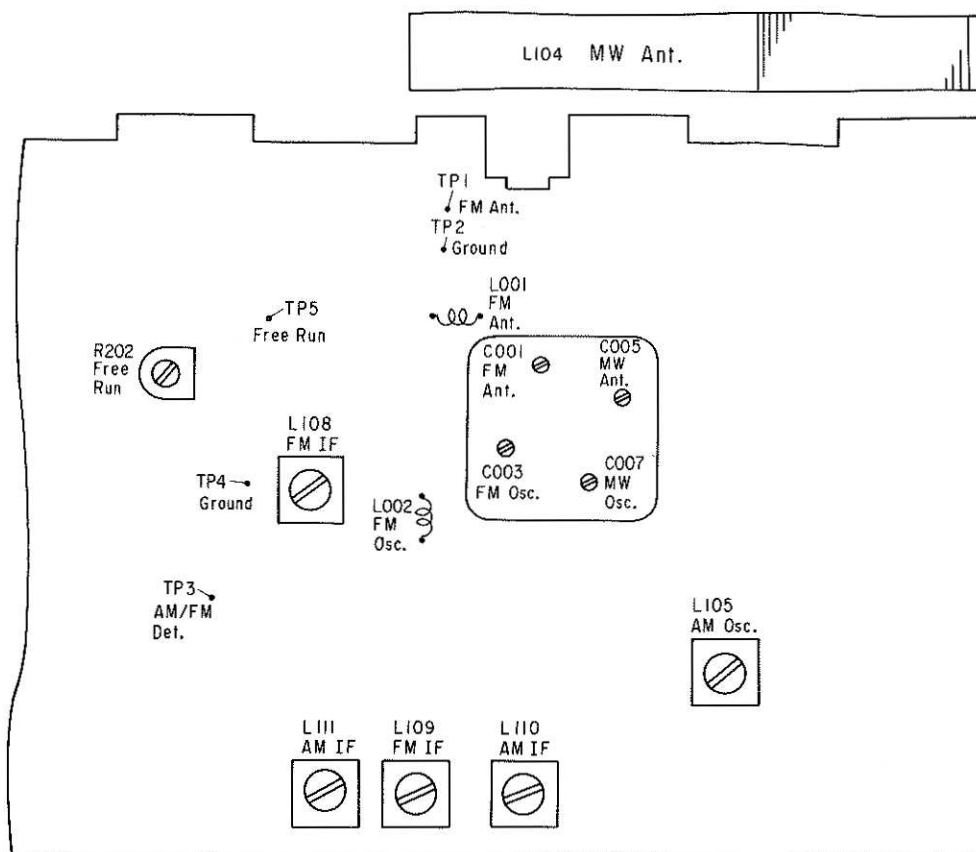


Figure 9.

TEST EQUIPMENT

1. Signal generator with a frequency range of at least from 450 kHz to 1700 kHz AM.
2. Oscilloscope with a side range amplifier of approximately 100 kHz.
3. Test loop – a coil of any size wire, one turn or more.
4. VTVM

AM ALIGNMENT

1. Turn on the AM signal generator and the VTVM allowing a fifteen-minute warm-up period.
2. Using the test loop across the output of the signal generator, inductively connect the signal generator to the radio.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set signal generator frequency as listed in ALIGNMENT CHART and maintain a sufficient output level to provide an indication on VTVM.
5. Set volume control at mid-position.
6. Proceed as outlined in the IF-MW, SW1 and SW2 ALIGNMENT CHART.

Note:

1. Use a screwdriver with plastic grip for all adjustments.
2. Standard test frequency 400 Hz and modulation 30% for AM.
3. Standard test frequency 400 Hz and deviation 22.5 kHz for FM.

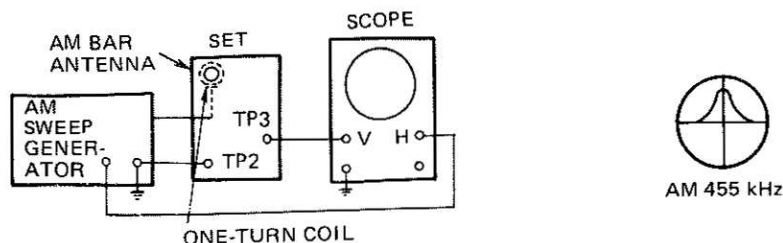


Figure 10.

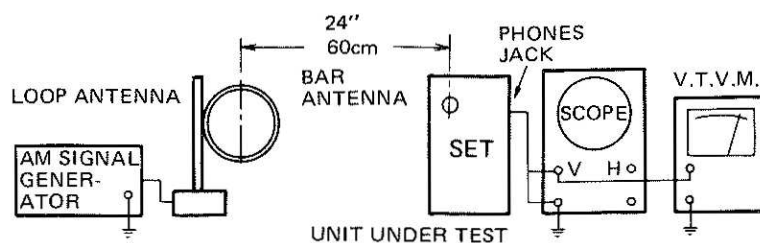


Figure 11.

MW ALIGNMENT CHART

Band	Step	Signal Generator Frequency	Radio Dial Setting	Adjustment	Remarks
IF	1	455 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	L110 L111	Adjust for maximum indication.
MW	2	510 kHz	Tuning Gang Fully Counter-clockwise (Lowest Frequency)	OSC. coil L105	Adjust for maximum indication.
	3	1650 kHz	Tuning Gang Fully clockwise (Highest Frequency)	OSC. Trim C007	Adjust for maximum indication.
	4	Repeat steps 2 and 3 as required.			
	5	600 kHz	Tune to Signal.	Ant. Coil L104	Adjust for maximum indication.
	6	1400 kHz	Tune to Signal.	Ant. Trim. C008	Adjust for maximum indication.
	7	Repeat steps 5 and 6 as required.			

FM-IF ALIGNMENT

1. Set the select switch to FM position.
2. Turn on both sweep generator and oscilloscope, and allow a fifteen-minute warm-up period.
3. Connect the RF SWEEP SIGNAL OUTPUT from the signal generator through the loop antenna to the receiver.
4. Connect the oscilloscope vertical input directly to the test point 3 and connect the shielded lead to the test point 2 or chassis ground.
5. Connect the SWEEP VOLTAGE OUTPUT of the sweep generator to the oscilloscope.
6. Proceed as outlined in the FM-IF ALIGNMENT CHART.

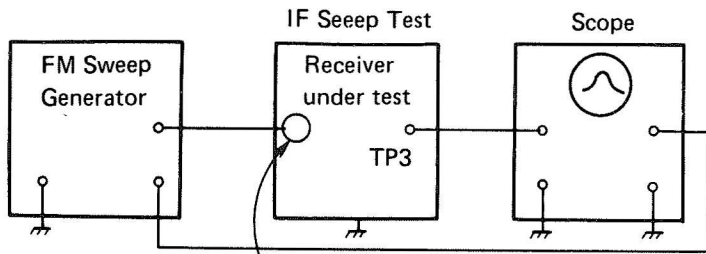


Figure 12. 3-turn Loop Antenna located near the L002.

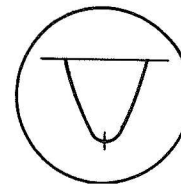


Figure 13.

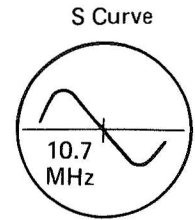


Figure 14.

FM-IF ALIGNMENT CHART

Step					Adjust. point	
1	Connect sweep generator output to a three-turn loop antenna of 10cm diameter.	Sweep generator of 10.7 MHz center freq. with 10.7 MHz marker.	Tuning Knob fully counterclockwise (Lowest Frequency.)	Set scope for connecting output signal from TUN OUT to vertical axis of scope "V" and sweep generator output to horizontal axis "H".	L108 L109	Turn the IF Transformer L109 fully counterclockwise to obtain a single peak. Adjust coil L108 in order until the best single peak is obtained. Figure 13. Finally turn the coil L109 to obtain S curve. See Figure 14.

FM-RF ALIGNMENT

1. Turn on the signal generator and the VTVM, and allow a fifteen-minute warm-up period.
2. Connect the signal generator output through a 75 ohm dummy antenna across FM ANT.
3. Connect the VTVM across the voice coil or a 3.2 ohm dummy load.
4. Set the volume control to mid-position.
5. Adjust the signal generator frequency as indicated in FM-RF ALIGNMENT CHART, and maintain a sufficient signal output level to provide a measurable indication.
6. Proceed as outlined in the FM-RM ALIGNMENT CHART.

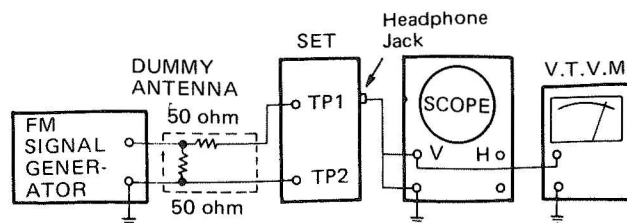


Figure 15.

FM-RF ALIGNMENT CHART

Step	Signal Generator	Radio Dial Setting	Adjustment	Remarks
1	87.3 MHz	Tuning Knob fully Counterclockwise (Lowest Frequency)	OSC. Coil L002	Adjust for maximum output indication
2	109 MHz	Tuning Knob fully Clockwise (Highest Frequency)	OSC. Trim. C004	Adjust for maximum output indication
3	Repeat steps 1 and 2 as required.			
4	90 MHz	Tune to signal	Ant. Coil L001	Adjust for maximum output indication
5	106 MHz		Ant. Trim. C002	
6	Repeat steps 4 and 5 as required.			

FREE RUN FREQUENCY ALIGNMENT

Adjust R202 under no signal condition so as to obtain 38 kHz \pm 75 Hz.

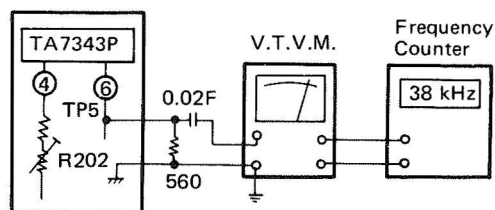


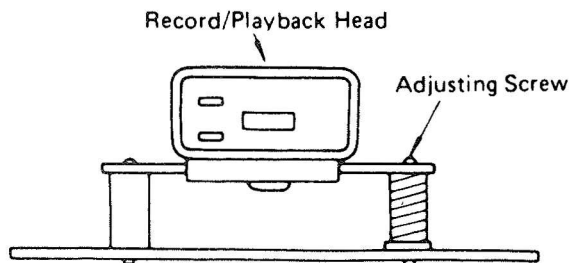
Figure 16.

RECORD/PLAYBACK HEAD ADJUSTMENT

Adjust azimuth with a test tape of 10 kHz (MTT-114) so that the Left Channel is maximum, then lock the section with screw.

RECORD/PLAYBACK HEAD ADJUSTMENT

A 6.3 kHz test tape must be used for this adjustment. Connect a VTVM or an oscilloscope to the headphones jack or speaker terminal and adjust the azimuth by using a phillips screwdriver to maintain the maximum output voltage.



Record/Playback Head Adjustment

Figure 17.

TAKE-UP TORQUE

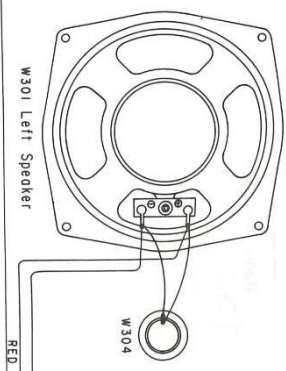
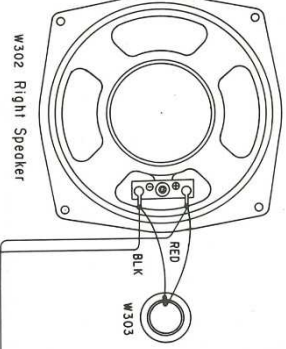
1. Insert cassette torque meter (HARTAK X-87 Torquette).
2. Press PLAY button and read torque meter. Torque should be 35 to 65 gcm.
3. Release PLAY button and press REWIND button. Torque should be 60 to 160 gcm. If necessary, clean take-up reel or drive belt with alcohol, or replace belt.

RT-SF1
RT-SF11

RT-SF1
RT-SF11

7. ELECTRICAL PARTS LOCATIONS

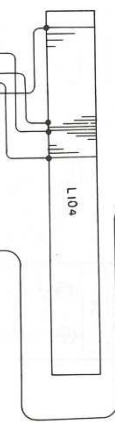
For RT-SF11 only



A001

W302 Right Speaker

W301 Left Speaker

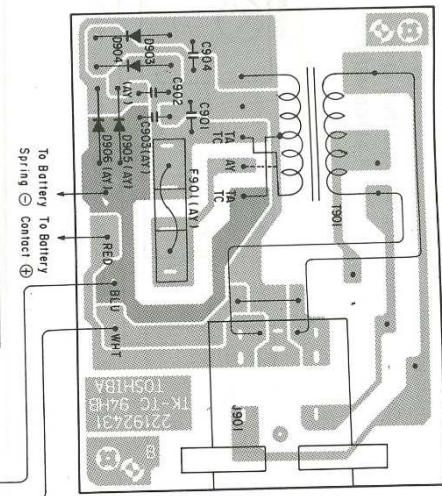


IC	Position	1	2	3	4	5	6	7	8	9
Q201	F M	2.6	1.0	4.4	1.6	0	3.6	1.8	2.0	2.0
	A W	2.8	1.3	4.8	1.0	0	4.2	4.8	2.4	2.4

IC	Position	1	2	3	4	5	6	7	8	9
Q401	REC	0	6.2	0	1.3	1.3	0	0	1.3	1.3
	PLAY	0	6.2	0	1.3	1.3	0	0.9	1.0	0
	REC	0	6.2	0	1.3	1.3	0	0.9	1.0	0

Tr	Position	1	2	3	4	5	6	7	8	9
Q402	PLAY	0	0	0	0.8	0	0.9	1.0	1.3	1.3
	REC	0	0	0	0.8	0	0.9	1.0	1.3	1.3

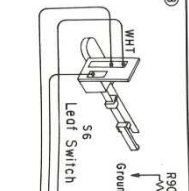
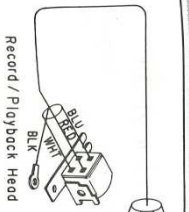
FET	Position	1	2	3	4	5	6	7	8	9
Q403	PLAY	1.3	0	1.3	0	1.3	0	1.3	0	1.3
	REC	1.3	0	1.3	0	1.3	0	1.3	0	1.3



To Battery To Battery
Spring ⊖ Connect ⊕

IC	Position	1	2	3	4	5	6	7	8	9
Q201	F M	0.7	1.5	1.7	1.4	0	2.5	1.7	2.5	2.5

IC	Position	1	2	3	4	5	6	7	8	9
Q401	F M	1.0	1.0	1.5	1.5	0.4	0	1.4	4.8	4.8
	A W	1.0	1.0	1.5	1.5	0.4	0	1.4	4.8	4.8



IC	Position	1	2	3	4	5	6	7	8	9	10	11	12
Q301	F M	8.5	4.4	5.0	0.6	0	0	0	0.6	0	4.4	8.5	8.0

8. SCHEMATIC DIAGRAM

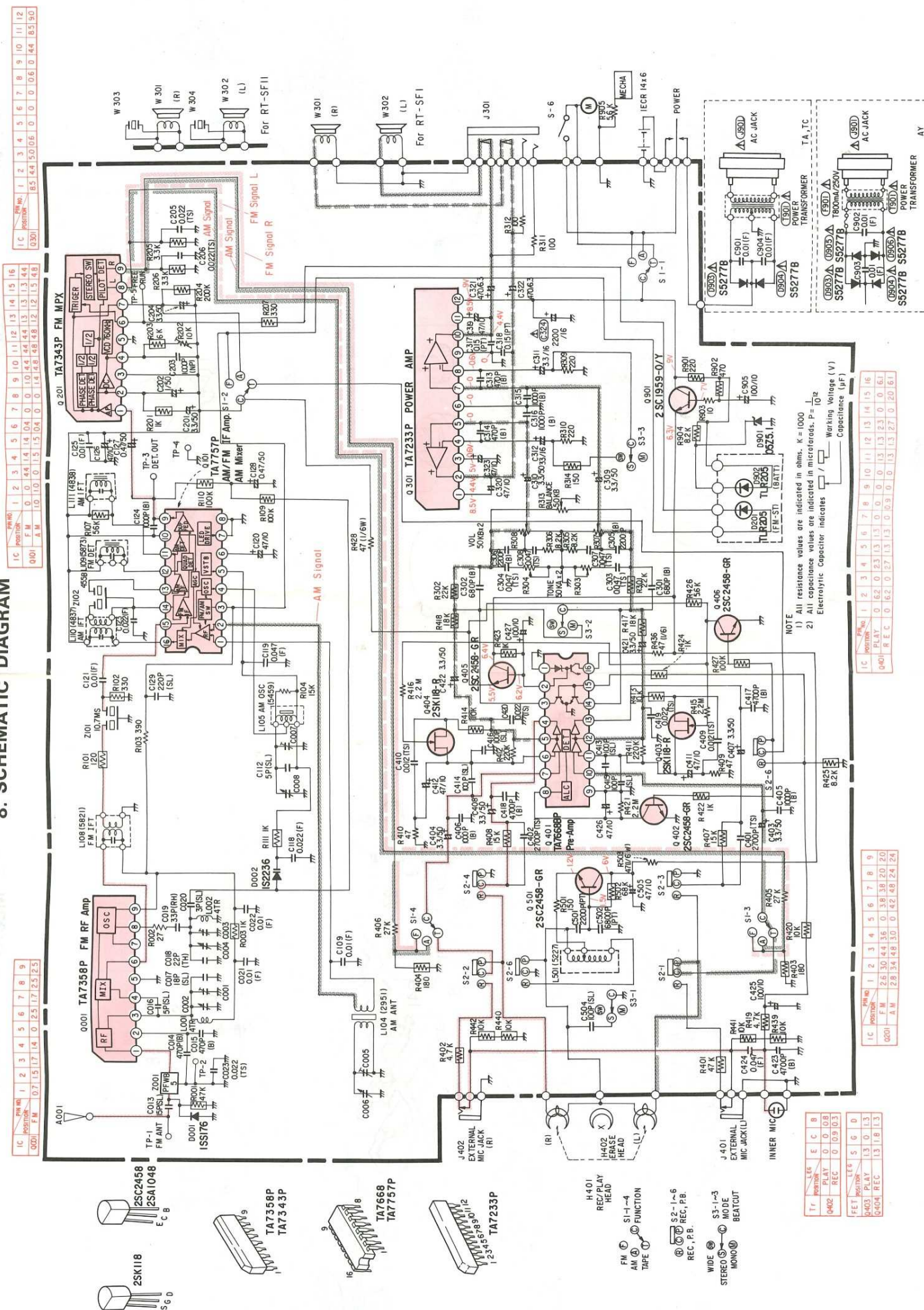
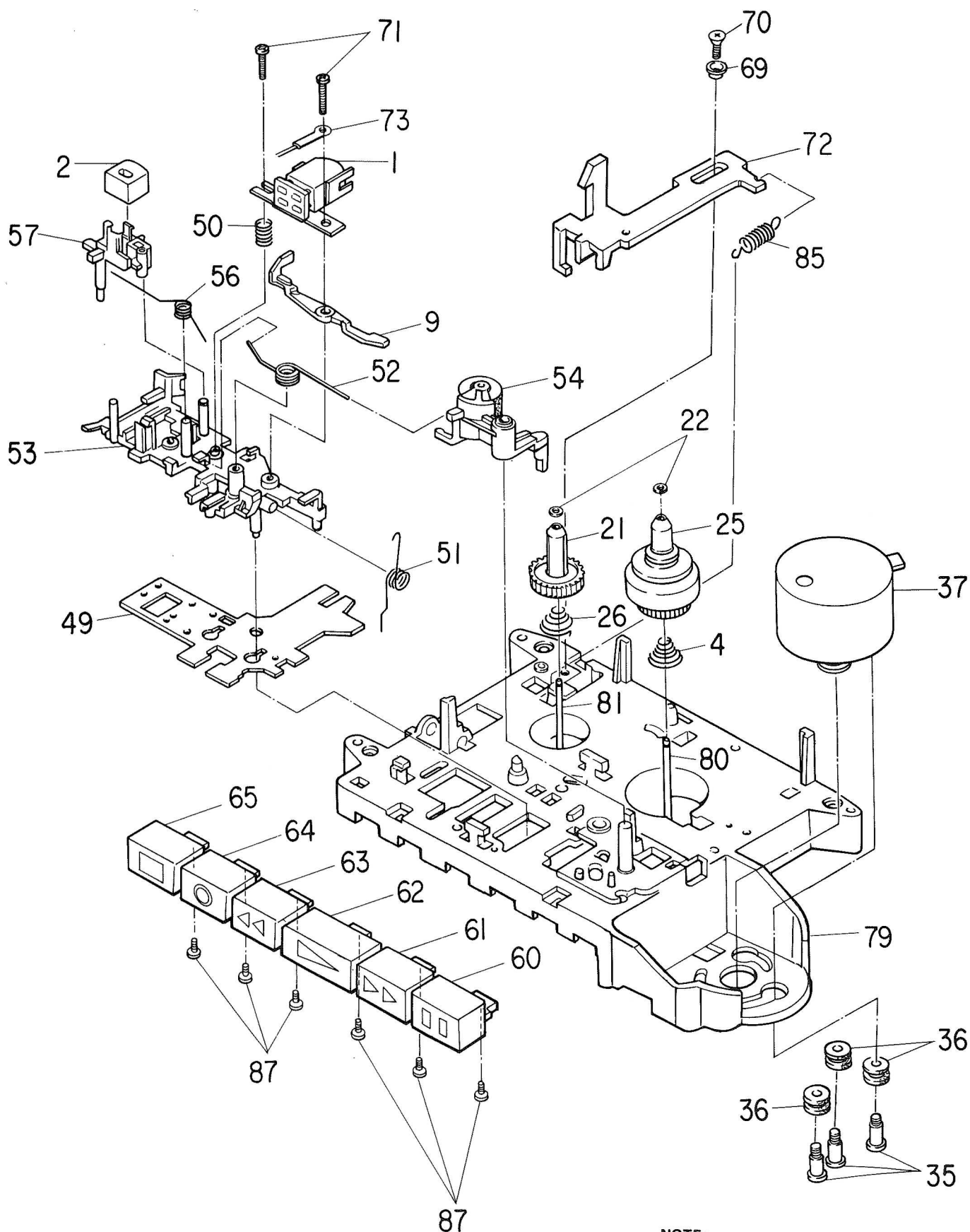


Figure 19.

9-1. MECHANISM EXPLODED VIEW (UPPER)

**NOTE:**

Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

Figure 20.

9-2. MECHANISM EXPLODED VIEW (LOWER)

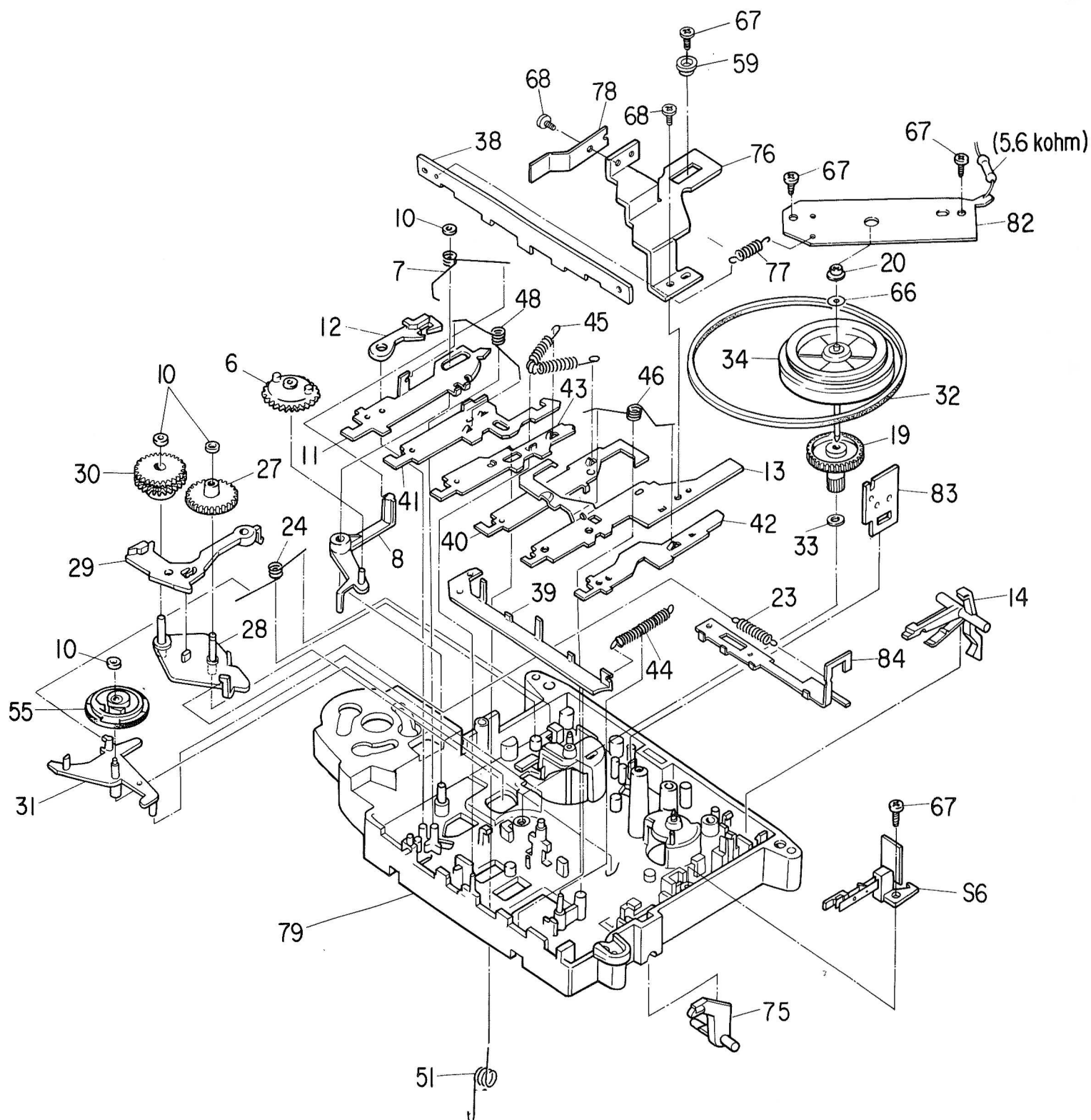


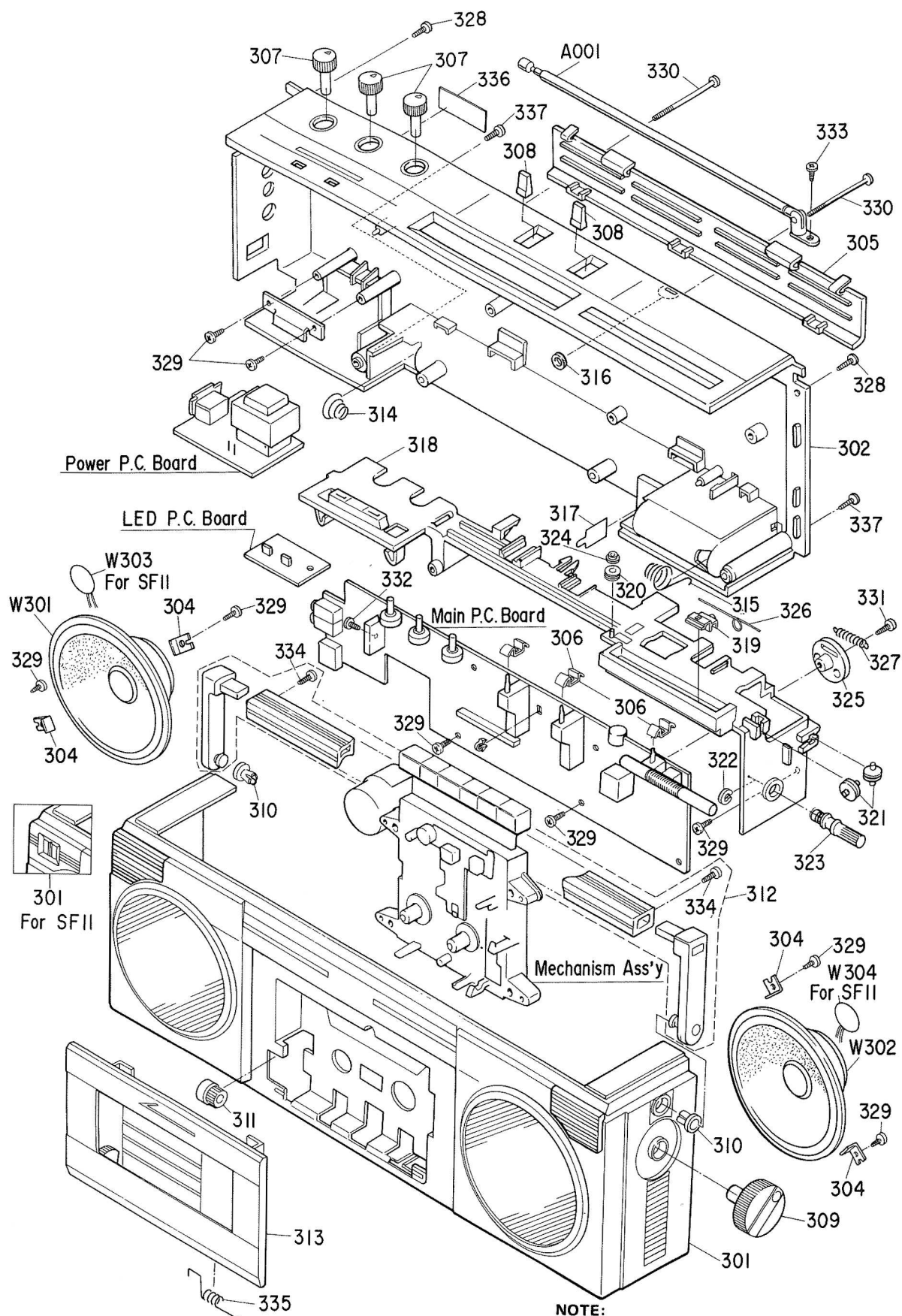
Figure 21.

10. PARTS LIST (MECHANISM)

Symbol No.	Part No.	Description
CASSETTE MECHANISM PARTS		
1	22217424	Head, Record/Playback, HRPT-424
2	22218240	Head, Erase, HET-58
4	25777055	Spring, Back Tension
6	25756247	ASO Gear
7	25773367	Spring, ASO Lever
8	25782440	ASO Lever
9	25782427	Lever, Detector
10	25783239	Bushing
11	25741852	Operation Plate, Pause
12	25784160	Lever, Pause Lock
13	25749013	Operation Plate, Record
14	25782444	Lever, Record Lock
20	25725340	Holder, Flywheel
21	25754386	Reel Plate, Supply
22	25764549	Washer
23	25776400	Spring
24	25773543	Spring
25	25712392	Reel Plate, Take-up
26	25777237	Spring, Back Tension
27	25756179	Gear, High-speed
28	25782441	Lever, Rewind
29	25782442	Lever, Fast Forward
30	25791353	Gear Ass'y, High-speed
31	25783238	Mtg. Plate, Take-up Idler
32	25755379	Belt, Drive
33	25764398	Washer
34	25717486	Flywheel Ass'y
35	22707747	Screw, Special, Motor
36	25761327	Cushion, Motor
37	25791795	Motor Ass'y
38	25732373	Plate, Stop
40	25749012	Operation Plate, Rewind
41	25749011	Operation Plate, F.F.
42	25741865	Operation Plate, Stop
43	25741844	Operation Plate, Play
44	25776331	Spring, Lock Slider
45	25776718	Spring, Operation
46	25778156	Spring, Operation
48	25773561	Spring, Operation
49	25749009	Head Slider
50	25777056	Spring, Azimuth
51	25773577	Spring, Head Slider
52	25773366	Spring, Pressure Roller
53	25783237	Head Mtg. Plate
54	25717480	Pressure Roller
55	25713547	Idler Ass'y, Take-up
56	25773544	Spring, Head Lever
57	25782428	Lever, Erase Head
60	25886185	Button, Pause
61	25886186	Button, Fast Forward

Symbol No.	Part No.	Description
62	25886182	Button, Play
63	25886187	Button, Rewind
64	25886183	Button, Record
65	25886184	Button, Stop
66	25766043	Washer, Flywheel
67	22707301	Screw, BID Hd. Tapping 2.6d x 8mmℓ
68	22707350	Screw, BID Hd. 2.6d x 5mmℓ
69	25726659	Spacer
70	22707849	Screw, FLT Hd. Tapping 2.6d x 10mmℓ
71	22707322	Screw, BID Hd. 2d x 10mmℓ
72	25784161	Slider, Eject
75	25784162	Lever, Up Select
77	25776764	Spring
79	25791772	Main Chassis Ass'y
85	25776711	Spring, Eject Slider
87	22708328	Screw, BID Hd. 2d x 10mmℓ, BLK Button
88	25776718	Spring

11. CABINET EXPLODED VIEW



NOTE:

Parts excluded in the parts list are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.


Figure 22.






12. PARTS LIST (CABINET)

Symbol No.	Part No.	Description
CABINET PARTS		
301	25883231	Front Cabinet Ass'y, S-TA
301	25883237	Front Cabinet Ass'y, S-AY
301	25883502	Front Cabinet Ass'y, K-AY
301	25883504	Front Cabinet Ass'y, R-AY
301	25883558	Front Cabinet Ass'y, SF11-S-TC
302	25883232	Back Cabinet Ass'y, S-TA
302	25883238	Back Cabinet Ass'y, S-AY
302	25883503	Back Cabinet Ass'y, K/R-AY
302	25883559	Back Cabinet Ass'y, SF11-S-TC
304	25846572	Mtg. Piece, Speaker
305	25882621	Cover, Battery, S-TA, AY
305	25882865	Cover, Battery, K/R-AY
306	25882868	Cover, Switch
307	25886164	Knob, Volume
308	25886165	Knob, Lever
309	25886166	Knob, Tuning, S-TA, S/K-AY
309	25886155	Knob, Tuning, R-AY
310	25825306	Washer, Handle
311	25844315	Gear, Damper
312	25815261	Handle Ass'y, S-TA, AY
312	25815260	Handle Ass'y, K/R-AY
313	25883241	Cover Ass'y, Cassette, S-TA, AY
313	25883513	Cover Ass'y, Cassette, K-AY
313	25883518	Cover Ass'y, Cassette, R-AY
314	22764018	Spring, Battery
315	25777291	Spring, Battery
316	25857022	Cushion, Microphone
317	25864166	Contact, Battery
318	22714315	Frame, Tuner
319	22741447	Dial Pointer
320	22742016	Pulley, Tuner Frame
321	22742287	Pulley, Tuner Frame
322	22743307	Retainer, Tuning Shaft
323	22743320	Shaft, Tuning
324	25783226	Bushing
325	22742319	Dial Drum
326	22999383	Dial Cord, 0.3mmd
327	25776781	Spring, Dial Drum
328	22707804	Screw, BID Hd. Tapping 3d x 12mmℓ, BLK
329	22707826	Screw, BID Hd. Tapping 3d x 10mmℓ
330	22708181	Screw, BID Hd. Tapping 3d x 62mmℓ, BLK
331	22707473	Screw, BID Hd. 2.6d x 6mmℓ
332	22707910	Screw, BID Hd. Tapping 3d x 6mmℓ
333	22708184	Screw, BID Hd. Tapping 2d x 10mmℓ, Rod Antenna
334	22707846	Screw, BID Hd. Tapping 3d x 8mmℓ, Nickel
335	25778196	Spring, Cassette Cover

Symbol No.	Part No.	Description
336	25808753	Nameplate, TA
336	25808754	Nameplate, AY
336	25808752	Nameplate, SF11-S-TC
337	22708177	Screw, BID Hd. Tapping 3d x 16mmℓ

13. PARTS LIST

CAUTION: The  mark, the symbol No. circled with oval in the schematic diagram and the shaded area in the parts list designate components which have special characteristics important for safety and should be replaced only with types identical to those in the original circuit or specified in the parts list.

Symbol No.	Part No.	Description
TRANSISTORS, ICS & DIODES		
Q001	B0325502	IC, TA7358AP
Q101	B0358070	IC, TA7757P
Q201	B0325350	IC, TA7343P
Q301	B0319970	IC, TA7233P
Q401	B0356695	IC, TA7668BP
Q402, 405, 406, 501	A6332440	Transistor, 2SC2458-GR
Q403, 404	A6041970	Transistor, 2SK118NEW-R
Q901	A6319300	Transistor, 2SC1959N-Y
D001	A7160570	Diode, 1SS176
D002	A7289000	Diode, 1S2236
D201, 902	A8603110	Diode, LED, TLR205
 D903, 904	A7978380	Diode, S5277B
D901	A7110023	Diode, Zener, 05Z5.1
COILS & TRANSFORMERS		
L001	22294450	Coil, FM Antenna
L002	22294551	Coil, FM Oscillator
L104	22242951	Coil, AM Antenna
L105	22245459	Coil, AM Oscillator
L108	22265821	IF Transformer, FM
L109	22265873	IF Transformer, FM, DET.
L110	22264837	IF Transformer, AM
L111	22264838	IF Transformer, AM
L501	22235227	Coil, Tape Bias Oscillator
 T901	22224338	Power Transformer, TA
 T901	22224217	Power Transformer, AY
 T901	22224338	Power Transformer, SF11
ELECTRICAL PARTS		
S1	22196295	Switch, Lever, FM-AM-TAPE Select
S2	22196433	Switch, Slide, Record/ Playback
S3	22196295	Switch, Lever, WIDE-STEREO-MONO MODE/BEAT CUT
S6	22195839	Switch, Leaf, Motor Power
J301	22198015	Jack, 3.5mmd, Headphone
J401, 402	22198016	Jack, 3.5mmd, Ext. Mic. R/L
 J901	22167976	AC Socket
A001	22124711	Antenna, Rod
W301, 302	22152489	Speaker, 100mmd
W303, 304	22152496	Speaker, 20mmd, SF11
Z001	22153121	Filter, FM RF

Symbol No.	Part No.	Description
Z101	22153299	Filter, Ceramic, FM
Z102	22153070	Filter, Ceramic, AM
G401	22154233	Microphone, Built-in
EP01	22167688	Back Cover, AC Socket
CAPACITORS		
D = $\pm 0.5\text{pF}$, J = $\pm 5\%$, K = $\pm 10\%$, M = $\pm 20\%$, Z = $-20+80\%$		
Abbreviations: CD = Ceramic Disk, PF = Plastic Film, EL = Electrolytic		
C001, 002, 003, 004, 005, 006, 007, 008	22308588	Variable Capacitor
C013	22361150	CD, 15pF, J, 50V
C014, 015	22349471	CD, 470pF, K, 50V
C016	22361509	CD, 5pF, D, 50V
C017	22361180	CD, 18pF, J, 50V
C018	22360160	CD, 22pF, J, 50V, TH
C019	22360149	CD, 33pF, J, 50V, RH
C020	22361309	CD, 3pF, D, 50V
C021, 022	22342103	CD, 0.01mfd, Z, 50V
C023	22360329	PF, 0.022mfd, M, 25V
C109	22342103	CD, 0.01mfd, Z, 50V
C112	22361509	CD, 5pF, D, 50V
C118	22342473	CD, 0.047mfd, Z, 50V
C119	22342473	CD, 0.047mfd, Z, 50V
C120	22483470	EL, 47mfd, 10V
C121	22342103	CD, 0.01mfd, Z, 50V
C123	22342223	CD, 0.022mfd, Z, 50V
C124	22349102	CD, 1000pF, K, 50V
C125	22342103	CD, 0.01mfd, Z, 50V
C126	22483470	EL, 47mfd, 10V
C127	22488478	EL, 0.47mfd, 50V
C128	22488478	EL, 0.47mfd, 50V
C129	22362221	CD, 220pF, K, 50V
C201	22488339	EL, 3.3mfd, 50V
C202	22488109	EL, 1mfd, 50V
C203	22321057	PF, 1000pF, J, 50V
C204	22488339	EL, 3.3mfd, 50V
C205, 206	22360329	PF, 0.022mfd, M, 25V
C301, 302	22349681	CD, 680pF, K, 50V
C303, 304	22360331	PF, 0.047mfd, M, 25V
C305, 306	22349222	CD, 2200pF
C307, 308	22360331	PF, 0.047mfd, M, 25V
C309, 310	22488339	EL, 3.3mfd, 50V
C311, 312	22483470	EL, 47mfd, 10V
C313, 314	22349471	CD, 470pF, K, 50V

Symbol No.	Part No.	Description
C315, 316	22349102	CD, 1000pF, K, 50V
C317, 318	22371154	PF, 0.15mfd, J, 50V
C319, 320	22483470	EL, 47mfd, 10V
C321, 322	22482471	EL, 470mfd, 6.3V
C323	22488470	EL, 47mfd, 10V
⚠ C324	22440604	EL, 2200mfd, 16V
C401, 402	22360537	PF, 2700pF, K, 25V
C403, 404	22488339	EL, 3.3mfd, 50V
C405, 406	22349102	PF, 1000pF, K, 50V
C407, 408	22488339	EL, 3.3mfd, 50V
C409, 410	22360545	PF, 0.012mfd, K, 25V
C411, 412	22483470	EL, 47mfd, 10V
C413, 414	22362101	CD, 100pF, K, 50V
C415, 416	22362101	CD, 100pF, K, 50V
C417, 418	22349447	CD, 4700pF, K, 50V
C419, 420	22360329	PF, 0.022mfd, M, 25V
C421, 422	22488339	EL, 3.3mfd, 50V
C423	22349472	CD, 4700pF, K, 50V
C424	22342473	CD, 0.047mfd, Z, 50V
C425	22483101	EL, 100mfd, 10V
C426	22483470	EL, 47mfd, 10V
C427	22483101	EL, 100mfd, 10V
C428	22488339	EL, 3.3mfd, 50V
C501	22371222	PF, 2200pF
C502	22371682	PF, 6800pF
C504	22362101	CD, 100pF
C505	22483470	EL, 47mfd, 10V
C901	22342103	CD, 0.01mfd, Z, 50V
C904	22342103	CD, 0.01mfd, Z, 50V
C905	22483101	EL, 100mfd, 10V
RESISTORS		
Resistors are Carbon Film 1/6W, $\pm 5\%$ unless otherwise noted.		
PRC is short for the printed resistor circuit. If replacement of the resistor in PRC is required, please use the substitutional fixed carbon film resistor of 1/6W, $\pm 5\%$ according to the following list.		
K = 1000, M = 1000000		
R001	22584473	47K ohm (PRC)
R002	22584560	56 ohm
R003	22584102	1K ohm (PRC)
R101	22584121	120 ohm (PRC)
R102	22584101	100 ohm
R103	22584331	330 ohm (PRC)
R107	22584563	56K ohm (PRC)
R109	22584104	100K ohm (PRC)
R110	22584104	100K ohm (PRC)
R201	22584102	1K ohm (PRC)
R202	22658761	10K ohm, Free Run, Semi-fixed Variable
R203	22584562	6K ohm (PRC)

Symbol No.	Part No.	Description
R204	22584204	200K ohm (PRC)
R205, 206	22584332	3.3K ohm (PRC)
R207	22584681	680 ohm (PRC)
R301, 302	22584393	39K ohm (PRC)
R303/304	22651583	Variable, 50K-A, Tone
R305, 306	22584472	4.7K ohm
R307/308	22651585	Variable, 50K-B, Volume
R309, 310	22584221	220 ohm
R311, 312	22584101	100 ohm
R313	22651582	Variable, 50K-B, Balance
R314	22584101	100 ohm
R401, 402	22584472	4.7K ohm (PRC)
R403, 404	22584181	180 ohm
R405, 406	22584273	27K ohm
R407, 408	22584183	18K ohm
R409, 410	22584470	47 ohm
R411, 412	22584334	330K ohm
R413, 414	22584103	10K ohm (PRC)
R415, 416	22584225	2.2M ohm
R417, 418	22584183	18K ohm
R419	22584472	4.7K ohm (PRC)
R420	22584103	10K ohm (PRC)
R421	22584225	2.2M ohm
R422	22584102	1K ohm (PRC)
R423, 424	22584102	1K ohm (PRC)
R426	22584562	5.6K ohm (PRC)
R427	22584102	1K ohm (PRC)
R428	22584560	56 ohm (PRC)
R439, 440	22584103	10K ohm (PRC)
R441, 442	22584103	10K ohm (PRC)
R501	22584151	150 ohm
R502	22584683	68K ohm (PRC)
R503	22584470	47 ohm
R901	22584221	220 ohm (PRC)
R902	22584471	470 ohm (PRC)
R903	22584100	10 ohm
R904	22584822	8.2K ohm (PRC)
R905	22584562	5.6K ohm
ACCESSORIES		
⚠ AC01	22176624	Power Supply Cord, TA
⚠ AC01	22176692	Power Supply Cord, AY
AC02	22903946	Owner's Manual, TA
AC02	22903948	Owner's Manual, AY
AC02	22904192	Owner's Manual, SF11

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